

AMENDMENT

Please replace the claims with the following:

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- 1 1. (Currently amended) A method for selectively auditing accesses to a
2 relational database, comprising:
3 receiving a query for the relational database;
4 automatically modifying the query prior to processing the query, so that
5 processing the query causes an audit record to be created and recorded only for
6 rows in relational tables that are actually accessed by the query and that satisfy an
7 auditing condition,
8 wherein the auditing condition specifies a condition based on a
9 value of a field in a row in the relational database, and wherein
10 satisfying the auditing condition allows selective auditing of the
11 query;
12 processing the modified query to produce a query result, wherein processing
13 the modified query includes,
14 creating the audit record for rows in relational tables that are
15 accessed by the query and that satisfy the auditing condition, and
16 recording the audit record in an audit record store; and
17 returning the query result.
 - 1 2. (Original) The method of claim 1, further comprising, if the query
2 includes a select statement, inserting a case statement into the select statement that
3 calls a function that causes the audit record to be created and recorded if the
4 auditing condition is satisfied.
 - 1 3. (Previously presented) The method of claim 2, further comprising
2 ensuring that the case statement is evaluated near the end of the query processing so
3 that the case statement is evaluated only after other conditions of the query are
4 satisfied.

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1 4. (Original) The method of claim 1, further comprising retrieving the
2 auditing condition for a given table from a data structure associated with the given
3 table.

1 5. (Original) The method of claim 1, wherein if the query modifies at least
2 one entry in the relational database, using a relational database system trigger to
3 create and record the audit record for the modification to the relational database.

1 6. (Original) The method of claim 2, wherein inserting the case statement
2 into the query further comprises:

3 inserting the case statement into the query;
4 allowing a query processor to allocate buffers for the query;
5 removing the case statement from the query;
6 allowing the query processor to generate a query plan for the query; and
7 scheduling the case statement near the end of the query plan to ensure that
8 the case statement is evaluated only after other conditions of the query are satisfied,
9 so that the audit record is created only for rows that are actually accessed by the
10 query.

1 7. (Original) The method of claim 1, wherein the audit record includes:
2 a user name for a user making the query;
3 a time stamp specifying a time of the query; and
4 a text of the query.

1 8. (Original) The method of claim 1, wherein the auditing condition
2 includes a condition for a field within the relational database.

1 9. (Currently amended) A computer-readable storage medium storing
2 instructions that when executed by a computer cause the computer to perform a
3 method for selectively auditing accesses to a relational database, the method
4 comprising:

5 receiving a query for the relational database;

6 automatically modifying the query prior to processing the query, so that
7 processing the query causes an audit record to be created and recorded only for
8 rows in relational tables that are actually accessed by the query and that satisfy an
9 auditing condition,

10 wherein the auditing condition specifies a condition based on a
11 value of a field in a row in the relational database, and

12 wherein satisfying the auditing condition allows selective auditing
13 of the query;

14 processing the modified query to produce a query result, wherein processing
15 the modified query includes,

16 creating the audit record for rows in relational tables that are
17 accessed by the query and that satisfy the auditing condition, and

18 recording the audit record in an audit record store; and
19 returning the query result.

1 10. (Original) The computer-readable storage medium of claim 9, wherein
2 the method further comprises, if the query includes a select statement, inserting a
3 case statement into the select statement that calls a function that causes the audit
4 record to be created and recorded if the auditing condition is satisfied.

1 11. (Previously presented) The computer-readable storage medium of claim
2 10, wherein the method further comprises ensuring that the case statement is
3 evaluated near the end of the query processing to that the case statement is
4 evaluated only after other conditions of the query are satisfied.

1 12. (Original) The computer-readable storage medium of claim 9, wherein
2 the method further comprises retrieving the auditing condition for a given table
3 from a data structure associated with the given table.

1 13. (Original) The computer-readable storage medium of claim 9, wherein if
2 the query modifies at least one entry in the relational database, the method further

3 comprises using a relational database system trigger to create and record the audit
4 record for the modification to the relational database.

1 14. (Original) The computer-readable storage medium of claim 10, wherein
2 inserting the case statement into the query further comprises:
3 inserting the case statement into the query;
4 allowing a query processor to allocate buffers for the query;
5 removing the case statement from the query;
6 allowing the query processor to generate a query plan for the query; and
7 scheduling the case statement near the end of the query plan to ensure that
8 the case statement is evaluated only after other conditions of the query are satisfied,
9 so that the audit record is created only for rows that are actually accessed by the
10 query.

1 15. (Original) The computer-readable storage medium of claim 9, wherein
2 the audit record includes:
3 a user name for a user making the query;
4 a time stamp specifying a time of the query; and
5 a text of the query.

1 16. (Original) The computer-readable storage medium of claim 9, wherein
2 the auditing condition includes a condition for a field within the relational database.
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1 17. (Currently amended) An apparatus that selectively audits accesses to a
2 relational database, comprising:
3 a receiving mechanism that is configured to receive a query for the
4 relational database;
5 a query modification mechanism that is configured to automatically modify
6 the query, prior to processing the query, so that processing the query causes an
7 audit record to be created and recorded only for rows in relational tables that are
8 actually accessed by the query and that satisfy an auditing condition,

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9 wherein the auditing condition specifies a condition based on a
10 value of a field in a row in the relational database, and
11 wherein satisfying the auditing condition allows selective auditing
12 of the query;
13 a query processor that is configured to process the modified query to
14 produce a query result, wherein processing the modified query includes,
15 creating the audit record for rows in relational tables that are
16 accessed by the query and that satisfy the auditing condition, and
17 recording the audit record in an audit record store; and
18 a returning mechanism that is configured to return the query result.

1 18. (Original) The apparatus of claim 17, wherein if the query includes a
2 select statement, the query modification mechanism is configured to insert a case
3 statement into the select statement that calls a function that causes the audit record
4 to be created and recorded if the auditing condition is satisfied.

1 19. (Previously presented) The apparatus of claim 18, wherein the query
2 modification mechanism is configured to ensure that the case statement is evaluated
3 near the end of the query processing so that the case statement is evaluated only
4 after other conditions of the query are satisfied.

1 20. (Original) The apparatus of claim 17, wherein the query modification
2 mechanism is configured to retrieve the auditing condition for a given table from a
3 data structure associated with the given table.

1 21. (Original) The apparatus of claim 17, wherein if the query modifies at
2 least one entry in the relational database, the apparatus uses a relational database
3 system trigger to create and record the audit record for the modification to the
4 relational database.

1 22. (Original) The apparatus of claim 18, wherein the query modification
2 mechanism is configured to:

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3 insert the case statement into the query;
4 allow the query processor to allocate buffers for the query;
5 remove the case statement from the query;
6 allow the query processor to generate a query plan for the query; and
7 schedule the case statement near the end of the query plan to ensure that the
8 case statement is evaluated only after other conditions of the query are satisfied, so
9 that the audit record is created only for rows that are actually accessed by the query.

1 23. (Original) The apparatus of claim 17, wherein the audit record includes:
2 a user name for a user making the query;
3 a time stamp specifying a time of the query; and
4 a text of the query.

1 24. (Original) The apparatus of claim 17, wherein the auditing condition
2 includes a condition for a field within the relational database.